

CROWN

GRAVITY SEPARATORS

Crown Gravity Separators



From farming to recycling, Crown gravity separators are used worldwide to improve the quality of the sample and separate efficiently by specific weight any granular type commodity that cannot be separated by screening (width), aspiration (weight) or indented cylinders (length).

Through decades of experience building and using gravity separators, Crown can offer a tailored and cost effective solution that suits your needs.

We take great pride in our work and consequently our separators are as renowned for their streamlined, space saving design, durability and engineering excellence as for their best in class separation capability.

In addition to the Crown Gravity Separator range, which includes tailor made dust hoods, air slides & interchangeable decks, we also design and build elevators, conveyors and de-stoning equipment in-house, enabling us to offer the complete end-to-end solution to our customers.

Agriculture

Crown Gravity Separators are used to improve the value of crop by rejecting a portion as necessary e.g. Hagberg improvement of milling wheat using a gravity separator as an integral part of a grain handling system. Gravity Separators are also used on all modern mobile seed processors.

For the removal of impurities, admixture, insect damage and immature kernels in the following examples and many more thus producing a bold, uniform, vigorous, high germination sample.

- **Wheat**
- **Barley**
- **Oilseed Rape**
- **Peas**
- **Beans**
- **Cocoa Beans**
- **Linseed**
- **Coffee Beans**
- **Grass Seeds**

Recycling

Crown Gravity Separators are also used in recycling applications such as separating valuable or viable metals, granular polymers, chipped waste tyres & minerals and many more.



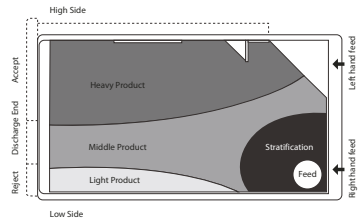
The Separation Process: **How a Gravity Separator works**

Stratification

From an inlet with an adjustable feed rate, the material is fed onto the gravity separator's inclined reciprocating grading deck, which normally has a special woven wire mesh surface, except for extremely fine products, when a specialist fabric deck is used.

High volume, low pressure air is passed through the mesh from the fan, the amount of air available is readily adjusted to suit the product being processed. This adjustment is to ensure that the lighter product is lifted to the top of the material and the heavier product remains on the surface of the grading deck, resulting in stratification of product.

Stratification Diagram



Separation

Due to the reciprocating motion of the inclined deck the heavy product will walk uphill to the highest side, whilst the lighter product will drift down towards the low side.

Simple adjustments in end tilt / side tilt / deck speed and volume of air passed through the product whilst the machine is running will dictate the nature of the separation and the throughput.

On Crown Gravity Separators all adjustments are readily and simply made whilst the machine is in use: this enables a combination of control adjustments to result in a very fine separation at the end of the machine, where the split will be made with adjustable knives or sliding chutes.

Crown Gravity Separator Range

We manufacture 3 models of gravity separator; the GS06, GS12 and GS18

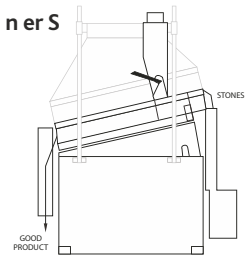
GS12



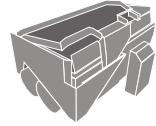
GS18



DeStoner S



Size Guide	GS12	GS18	DeStoner S
Length (mm)	2185	3200	4015
Height (mm)	1600	1800	1900
Width (mm)	1400	1700	2115
Deck (mm)	1500 x 750	2650 x 1250	3515 x 1500
Deck Area (sqm)	1.9	3.0	4.6
Fan with Inverter Control	5.0kw	7.5kw	2 x 7.5kw
Drive with Inverter Control	1.1kw	1.1kw	1.5kw
Hydraulic Motor	1.1kw	1.1kw	1.5kw
Weight	1100kg	1400kg	2000kg



Capacity Guide - tonnes per hour*	GS06	GS12	GS18
Commercial Cleaning Wheat	6	12	18
Seed Cleaning Wheat	4.5	9	15
Barley	4	8	13
Rye	4	8	13
Maize	3.5	6.5	12
Coffee	3.5	6	11
Peas	3.5	6	11
Rice	3	4.5	7.5
Rape	3	4.5	7
Sugar Beet	2	4	6.5
Linseed	1.5	3	5
Radish	-	1.5	2
Herbage	-	1	1.5

*Subject to the seed quality, moisture, impurities and quality of separation required. Capacities are stated for guide use only.

Crown Conveyors and Elevators

Conveyors: Key Benefits

Crown Conveyors combine outstanding performance with reliability and durability.



- Crown Conveyors can be manufactured entirely out of mild, stainless or galvanised steel if required.
- Crown Conveyors have a direct drive from their motor, no belts or pulleys.
- Crown Conveyors can be manufactured in differing widths or lengths to suit customer requirements.
- Crown Conveyors have a flat slipform bed with sidewall type belts.
- Crown Conveyors have a self-cleaning belt design.
- Crown Conveyors can be run on inverters to customise throughput.

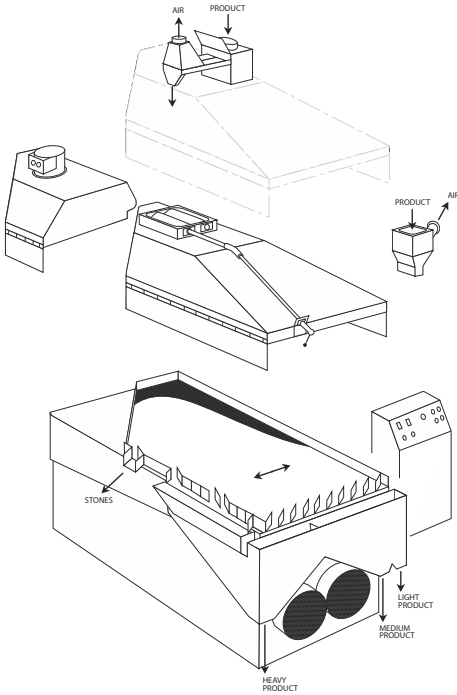
Elevators: Key Benefits

Crown Elevators combine compact design with reliability and durability.



- Crown elevators are very compact.
- Crown elevators have a simple belt adjustment design.
- Crown elevator belts can be checked & the elevator emptied through a simple trapdoor situated beneath tail pulleys.
- Both head and tail pulleys on the Crown elevators are of slatted design to minimise wear on belts & also stop the unwanted retention of material within the device.
- Crown elevators can be manufactured out of mild, stainless or galvanised steel.
- Crown elevators have a direct drive from their motor, no belts or pulleys.
- Crown elevators can be run on inverters to customise throughput.

Optional Dust Hoods



Service, Support, and Optional Extras

All Crown Gravity Separators are robustly constructed from mild steel with a lightweight efficient aluminium deck framework which is easily changed for different products. The deck includes a stone trap and adjustable heavy and light product outlet gates.

Our decks can be supplied in various sizes of woven mild steel as well as with linen covers for fine seeds.

Two heavy product hoppers, one light product hopper and an air inlet filter are included. The machines are available in right or left hand construction for ease of installation and to enable doubling up when required.

Crown offers a comprehensive spare parts backup service; from small serviceable items such as belts, bearings & bushes, right up to major items which are manufactured in house on a turnaround time basis.

Delivery

We can arrange shipping to anywhere in the world – contact us for details.

